

LEHTOVIRTA et al
Appl. No. 09/778,960
March 24, 2004

REMARKS

As a preliminary matter, Applicants appreciate the Examiner including initialed copies of the PTO-1449 forms submitted with Information Disclosure Statements dated November 8, 2001 and February 8, 2001. However, Applicants have not received a copy of the initialed PTO-1449 form submitted with the Information Disclosure Statement filed on April 2, 2001. Consideration and receipt of the initialed PTO-1449 form submitted with the Information Disclosure Statement on April 2, 2001 is respectfully requested.

Applicants appreciate the Examiner's allowance of claims 22-33. For the reasons set forth below, Applicants believe that all claims should be allowed.

Claims 1-6, 8-9, 11-20, 34-36, and 38-45 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,631,122 to Arunachalam (hereinafter the '122 patent). This rejection is respectfully traversed.

To establish that a claim is anticipated, the Examiner must point out where each and every limitation in the claim is found in a single prior art reference. *Scripps Clinic & Research Found. v. Genentec, Inc.*, 927 F.2d 1565 (Fed. Cir. 1991). Every limitation contained in the claims must be present in the reference, and if even one limitation is missing from the reference, then it does not anticipate the claim. *Kloster Speedsteel AB v. Crucible, Inc.*, 793 F.2d 1565 (Fed. Cir. 1986). The '122 patent fails to satisfy this rigorous standard.

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The '122 patent is primarily concerned with addressing the problem of "the hostile nature of the radio link and limited QoS provisioning-within the Internet" while still trying to provide wireless end users "with a multitude of services comparable in quality to their wireline counterpart." Column 2, lines 31-35. The '122 patent employs a wireless QoS agent 801 that maps multimedia IP QoS requirements to specific radio link requirements and provides dynamic link adaptability and resource allocation, lower layer flow control, radio channel link QoS monitoring, and seamless extension of IP QoS to a wireless user.

In contrast to the '122 patent's focus on QoS and the radio link, claims 1-21 and 34-45 deal with failures in a physical node or a device within a node. When a failure is detected in such a node or one of its devices, mobile radio connections affected by that failure are determined. A message is then sent to one or more other nodes supporting a mobile radio connection that is affected by the node or device failure. As a result, the node or nodes receiving the message release the mobile radio connections associated with the failed node or device, but the connections to that mobile radio that are unaffected by the node or device failure are maintained.

The Examiner contends that a failure is detected in a device node in the '122 patent, citing column 5, lines 54-67. The Examiner interprets the statement "dynamic re-allocation of resources when there is a QoS degradation (as decided by the Frame Error Rate (FER) or some other criteria)" as an alleged node failure. Applicants respectfully disagree.

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This text refers to a degradation in quality of service as a result of the hostile nature of the radio link and not as a result of a node or device failure. The '122 explains that the radio link:

demonstrates totally unpredictable behavior (fading, shadowing, etc.) largely due to the mobility of the users, the terrain conditions, and multipath effects, etc. The reliability of the CDMA wireless link is also heavily dependent on the other-user interference which is a random function of the number and spatial co-location of the users. (See column 2, lines 24-30.)

At column 5, the '122 patent explains what is meant by dynamic reallocation of resources where there is a quality of service degradation. Specifically, "the QoS agent will be able to help some of these algorithms to perform [radio] link adaptation depending on the current quality of the radio link and service applications...The traditional RRM performs dynamic channel (re)allocation when instructed by the QoS agent...during a period of frequent error burst [related to the radio link]." See column 5, lines 5-13 (emphasis added). QoS degradation results from degraded conditions over the radio link.

Thus, with respect to independent claims 1, 15, 34 and 43, the '122 patent fails to disclose detecting a failure in a node. It is unreasonable to suggest that detecting degradation in quality of service of a connection corresponds to a node failure. That is not what is described in the specification of the instant application. Nor would one of ordinary skill in this art equate a quality of service degradation as a result of changed radio link conditions with a failed network node or a failure in that node.

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The '122 patent also fails to disclose "sending a message identifying the one or more affected [by the detected node failure] subscriber unit connections," as recited in claim 1. The Examiner refers to column 8, line 53 through column 9. This text refers to the radio resource manager making a call admission decision based on its ability to meet the quality of service requested for "the new flow and the quality of service (e.g. FER, delay, jitter etc.) that can be achieved currently by the system." See column 9, lines 7-10 (emphasis added). The text in lines 30-37 in column 9 also relates to making a call admission decision for a new flow. But the connection (i.e., the call flow) in claim 1 has already been established/admitted. The message in claim 1 identifies, not whether a particular desired quality of service can be met, but rather identifies an already-admitted connection which is going to be adversely effected by the detected node failure. These features are not disclosed in the '122 patent. Claims 34 and 43 recite language similar to that in claim 1 not disclosed in the '122 patent.

Regarding claim 15, the Examiner fails to identify where the '122 patent sends "a message identifying the failed device to one or more other nodes." Where or how does a quality of service degradation message identify a failed device? Quality of service degradation relates to the condition of a radio channel and not to a node or device. The Examiner makes an incorrect assumption on page 5. The Examiner assumes that a quality of service degradation "clearly indicates that a node is failing or may have failed completely." As explained, the quality of service degradation specifically described by the '122 patent does not pertain to or result from any node or device failure, but rather

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pertains to or results from changes in the "totally unpredictable behavior" and the "hostile nature" of the radio link. See column 2. The quality of service degradation may and very often occurs irrespective the node failing partially or completely.


Nor does the '122 patent disclose the features of the dependent claims. However, lacking multiple features of the rejected independent claims, there is no need to specifically address the deficiencies of the dependent claim rejections.

All of the rejections should be withdrawn because they based on a faulty assumption and an improper analogy. The application is now in condition for allowance. An early notice to that effect is earnestly solicited.

Respectfully submitted,

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